

From: ErrorTracker
Sent: Fri 9/26/2003 11:04 AM
To: FORREST.MIMS@IEEE.ORG; ErrorTracker
Cc:
Subject: ACKNOWLEDGEMENT OF REQUEST FOR CORRECTION: FOR RFC # 12856

Thank you for your request for correction under the Environmental Protection Agency's Information Quality Guidelines dated 09/25/2003. Your request was received in this office on 09/25/2003 and has been forwarded to the appropriate organization within the Agency.

REPORTED REQUEST FOR RFC #: 12856

Request for Correction: OZONE CONCENTRATIONS MEASURED AT CAMS 23 IN SAN ANTONIO, TEXAS, DURING SUMMER 2002 WERE ACCEPTED BY EPA, DESPITE PROTESTS FROM ME AND OTHERS THAT THE OZONE ANALYZER WAS FAULTY AND PROVIDED DATA THAT DOES MEET ACCEPTABLE SCIENTIFIC STANDARDS. ERRONEOUS DATA FROM THIS INSTRUMENT ARE ACCESSIBLE FROM VARIOUS EPA WEB SITES, INCLUDING TABULATED DATA AND MISLEADING VISUALIZATIONS ON THE EPA AIR NOW WEB PAGE. THIS ERROR WAS NOT MADE KNOWN TO THE PUBLIC UNTIL I INDEPENDENTLY FOUND IT, EVEN THOUGH THE PROBLEM WAS WELL KNOWN TO VARIOUS LOCAL, TEXAS AND POSSIBLY EPA OFFICIALS. I CALCULATED A MEAN OZONE CONCENTRATION ERROR OF +10.4 PPB BY COMPARING NOCTURNAL MINIMA FOR 2002 WITH NOCTURNAL MINIMA IN PREVIOUS YEARS. THIS METHOD ASSUMES LITTLE CHANGE IN TRAFFIC PATTERNS THAT LEAD TO OZONE TITRATION BY NO IN AUTOMOBILE EXHAUST, WHICH IS A REASONABLE ASSUMPTION. THE TCEQ CALCULATED A MEAN ERROR OF +10 PERCENT BY COMPARING DATA FROM CAMS 23 WITH DATA FROM CAMS 58. THIS!

METHOD IS LESS RELIABLE DUE TO THE EFFECT OF THE PLUME FROM A LARGE POWER PLANT. HOWEVER, THE RESULT IS VERY SIMILAR TO THE ERROR I INDEPENDENTLY IDENTIFIED. ACCORDING TO THE CAL/SPAN SPREADSHEET SENT BY DR. DAVE SULLIVAN AT TCEQ, CAMS 23 HAD MORE THAN 80 "WARNING" FLAGS DURING THE SUMMER OF 2002. THERE ARE MANY EXAMPLES OF STRINGS OF SUCH WARNING FLAGS WITH NO CALIBRATION OR NO 'PASSED' FLAG. THIS HISTORY OF WARNING FLAGS COUPLED WITH THE OBVIOUS INSTRUMENT ERROR (HIGHEST OZONE IN TEXAS ON SOME DAYS) RAISES SERIOUS QUESTIONS ABOUT WHY THESE DATA WERE SENT TO EPA. WHY THE EPA ACCEPTS SUCH DATA WITH NO QUESTIONS ASKED RAISES TROUBLING QUESTIONS FOR THE ENTIRE OZONE MONITORING PROGRAM. HOW MANY OTHER INSTRUMENTS PERFORM AS ERRATICALLY AS THE ANALYZER AT CAMS 23?

Compliance with IQGs: THE EPA CLAIMS FOR ITSELF A STANDARD FAR HIGHER THAN THE ONE IT PRACTICES: "IN MEETING THE PUBLIC DEMAND FOR HIGH QUALITY ENVIRONMENTAL DATA, EPA HEADQUARTERS, REGIONAL AND STATE REPRESENTATIVES INHERENTLY HAVE A RESPONSIBILITY TO PROVIDE ACCURATE DATA." (SEE [HTTP://WWW.EPA.GOV/CDX/IECP.HTML](http://www.epa.gov/cdx/iecp.html).) THE OZONE ANALYZERS USED BY THE EPA AND STATE AGENCIES HAVE A TYPICAL ACCURACY OF +/-1 PPB. THUS, AN ERROR OF 10 PPB IS CLEARLY NOT "ACCURATE DATA." THE EPA ALLOWS A CALIBRATION TOLERANCE IN OZONE MEASUREMENTS OF +/- 20 PERCENT. WHEN I DISCLOSE THIS TO ELECTED OFFICIALS, THE MEDIA AND VARIOUS SCIENTISTS, THE RESPONSE IS ALWAYS LAUGHTER, ESPECIALLY WHEN I THEN STATE THAT THIRD GRADE STUDENTS CAN PROVIDE HIGHER QUALITY OZONE MEASUREMENTS (+/- 10 PERCENT) THAN THE EPA USING IMPROVED PAPER TEST STRIPS DEVELOPED WITH FUNDING FROM NSF AND NASA (SEE [WWW.GLOBE.GOV](http://www.globe.gov)). I HAVE MEASURED COLUMN OZONE SINCE 1989 TO WITHIN 1% OF THE WORLD OZONE STANDARD. THIS IS THE EXPECTED ACCU!

RACY IN MY FIELD.

Recommendation: 1. PEER REVIEW PANEL. THE EPA +/-20% CALIBRATION TOLERANCE FOR OZONE AND OTHER GAS ANALYZERS MUST BE CHANGED TO COMPLY WITH THE "BEST AVAILABLE MONITORING" REQUIREMENTS OF THE CLEAN AIR ACT AND CUSTOMARY DEFINITIONS OF ACCURACY. I RECOMMEND THAT EPA ASSIGN AN

INDEPENDENT PANEL OF SCIENTISTS TO REVIEW THE CURRENT STANDARD AT THE EARLIEST POSSIBLE DATE. I RECOMMEND THAT THIS PANEL CONSIDER A REASONABLE

CALIBRATION TOLERANCE NOT TO EXCEED +/-5 PERCENT. I AM WILLING TO SERVE ON THE PANEL OR TESTIFY BEFORE IT.

2. CORRECT THE EPA DATA BASE. EPA SHOULD IMMEDIATELY REMOVE FROM ITS WEB SITE AND FROM CONSIDERATION ALL DATA FROM CAMS 23 THAT WAS KNOWN TO BE DEFICIENT BY THE TCEQ REGULATORS AND POSSIBLY THE EPA. THERE IS ABUNDANT INTERNAL TCEQ CORRESPONDENCE CONCERNING THIS ERROR THAT WILL BE PRODUCED SHOULD THIS REQUEST REQUIRE AN APPEAL.

Impact: 1. MODEL STUDIES. THE CLEAN AIR ACT MANDATES THE MODELING BEING EMPLOYED BY THE AIR TECHNICAL COMMITTEE ON WHICH I SERVE. BAD DATA FROM CAMS 23 IMPACTS MODEL RESULTS AND MUST BE REMOVED.

2. IMPROVED OZONE MEASUREMENT ACCURACY. DELETING DATA KNOWN TO BE FAULTY WILL DRAMATICALLY RAISE THE STANDARD OF EPA OZONE MEASUREMENTS HERE IN TEXAS AND NATIONWIDE. THE +/-20% CALIBRATION TOLERANCE ENCOURAGES SLOPPY PRACTICES BY INSTRUMENTATION TECHNICIANS. WHY SHOULD A TECHNICIAN TRY FOR 10%, MUCH LESS 2%, WHEN 20% WILL PASS? THIS ALONE IS A MAJOR OBJECTION TO THE +/-20% RULE. AT LEAST 7 STATES HAVE COMPLAINED TO THE EPA ABOUT OPERATIONAL PROBLEMS WITH THE EPA-RECOMMENDED DASIBI OZONE ANALYZER, WHOSE MANUFACTURER IS NO LONGER IN BUSINESS. THERE ARE TWO PAPERS ON THIS SUBJECT. HIGH HUMIDITY AND TEMPERATURE ARE THE MOST COMMON FACTORS CAUSING PROBLEMS. MERCURY VAPOR CONTAMINATION CAN ALSO CAUSE VERY LARGE ERRORS. REPORTS DESCRIBE HG VAPOR CONTAMINATION FROM VARIOUS SOURCES, INCLUDING BROKEN THERMOMETERS (ONE ON A ROOF AND ANOTHER INSIDE THE SHELTER) AND A BROKEN FLUORESCENT LAMP. REQUIRING HIGHER STANDARDS WILL REQUIRE REPLACEMENT OF OLD INSTRUMENTS.

3. COMPLIANCE WITH EXISTING STANDARDS. REQUIRING EPA TO ABIDE BY STANDARDS ALREADY IN PLACE WILL GREATLY ENHANCE THE AGENCY'S REGULATORY CREDIBILITY. FOR EXAMPLE, IN ACCORDANCE WITH THE CHARTER PROVIDED BY THE FEDERAL CLEAN AIR ACT (CAA), THE EPA MANDATES THAT DATA BE "...REPRESENTATIVE OF THE ATMOSPHERIC CONDITIONS BEING MEASURED" (NAMS/SLAMS NETWORK...QUALITY ASSURANCE PROJECT PLAN FOR AIR MONITORING IN TEXAS, TCEQ, A-7, PAGE 1, 2002). THE CAA ITSELF DISCUSSES THE NEED FOR QUALITY MEASUREMENTS. IT IS MY IMPRESSION FROM CONVERSATIONS WITH TCEQ'S DR. DAVE SULLIVAN THAT HE DOES NOT VIEW CAMS 23 AS HAVING PROVIDED QUALITY MEASUREMENTS FROM 2000-2002. (CONTINUED - TEXT EXCEEDED CHARACTER LIMIT FOR THIS DATA FIELD - PLEASE SEE COMPLETE E-MAIL)

RFC # 12856 WAS SUBMITTED BY:

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The Environmental Protection Agency's goal is to respond to requests within 90 days of receipt. In the meantime, if you have any questions regarding the Information Quality Guidelines or the Request for Correction process, please visit the EPA Information Quality Guidelines site (www.epa.gov/oei/qualityguidelines/index.html) or send a letter or fax or e-mail to our office at the address noted below. Please include the Request Number stated in the reference line of this letter in all correspondences.

Sincerely,

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